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Getting More Deterrence Out of Deliberate Capability Revelation

Kevin N. Lewis

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In recent years, the United States has increasingly relied on sophisticated yet sensitive military capabilities to counterbalance powerful Soviet forces. To the extent that the Soviets have little or no understanding of deliberately concealed U.S. capabilities, their assessments of the military balance may be biased. The more successfully the United States protects key capabilities, the more this bias could result in the Soviets' overestimating their own military potential relative to that of the United States. A distorted perception of the balance could be destabilizing if it enhanced the Kremlin's expectation of military success. Therefore, the United States should consider whether it might deliberately unveil concealed capabilities to influence Soviet perception of the military balance, thereby enhancing deterrence. This Note lays out some first-order propositions about "deliberate capability revelation" and analyzes its potential efficacy.

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Getting More Deterrence Out of Deliberate Capability Revelation

Kevin N. Lewis

August 1989

Prepared for
The United States Air Force

RAND

PREFACE

This Note was prepared in response to a request by the then-Director of Plans, HQ USAF, Major General Perry Smith, that RAND look at the question of enhancing deterrence, particularly in a crisis, by revealing previously concealed military capabilities. The original request was made in 1982, and a memorandum on which this Note is based was produced shortly thereafter. This material was updated to reflect new developments in this field under the project entitled "Major Air Force Issues" in the National Security Strategies Program of Project AIR FORCE. This Note should be useful to defense planners concerned with the management of advanced technology (including special access) programs and to those interested in the larger question of how Soviet perceptions of U.S. military capabilities are formed—and how these may be influenced to U.S. advantage. The aim is not to evaluate specific cases where revelation of concealed U.S. capabilities might be considered, but rather to develop a conceptual framework for this generic problem. For their comments on earlier drafts, the author is indebted to General Perry Smith, Colonel Harold (Bud) Coyle, and Major Timothy McMahon of the USAF; to Roger Facer, a British Ministry of Defense visiting fellow then at RAND; and to RAND colleagues Michael Rich, James Thomson, and James Winnefeld.

SUMMARY

In recent years, the United States has come to rely more and more on sophisticated yet often sensitive military capabilities to counterbalance powerful Soviet forces. To the extent that the Soviets have a poor understanding of deliberately concealed U.S. military capabilities, or none, their assessments of the military balance may be biased systematically. Ironically, the more successfully we protect key capabilities, the more this bias could result in the Soviets' overestimation of their military potential relative to our own. The result of a distorted perception of the balance could, in principle anyway, be disaster if the Kremlin's expectation of military success in a war with the West were to be enhanced correspondingly.

That being the case, should the United States deliberately unveil concealed capabilities to influence Soviet perception of the balance, thereby enhancing deterrence? Our basic problem would be to balance the need to maximize deterrence with the need to maintain the effectiveness of sensitive concealed programs. To approach this problem systematically, this Note lays out some first order propositions about what will be called "Deliberate Capability Revelation" (DCR) and analyzes its potential efficacy.

In most circumstances, we would be interested in revealing hardware devices ("gadgets") or other specifications (rather than employment plans, aims, etc.) Although a covert capability has no deterrent value until some aspects of its nature are known, not every attribute need be advertised as part of a deliberate revelation. Further, many capabilities lack sufficient relevance to military balances of interest in a crisis to be of much use in a DCR scheme. Most capabilities of interest are covert because their operational effectiveness depends to some extent on quite perishable security attributes; such considerations, in addition to certain scenario features, should drive our evaluation of whether a particular capability might be considered as a DCR initiative. Another set of basic factors underlying design of a conceptual DCR scheme relates to the degradation of the remaining "shelf life" of a candidate for DCR and the sequence of events that follow a revelation.

Given the broad strategic aim of maximizing our deterrent potential, by far the most important question is whether the injection of some new technical consideration into an enemy net assessment process will affect his behavior in a crisis. Here it is useful

to distinguish between enemy decisionmaking both in crisis scenarios and on a day-to-day basis.

Ideally, we would be able to reveal a critical capability at a crucial point in a crisis in such a way that an undesirable chain of events, apparently leading toward war, can be halted. Candidate capabilities for such a role should be shocking, credible, comprehensible to top adversary political leaders (and not just supporting staffs), and so forth. In short, DCRs should be perceived as playing a sufficiently decisive role in the coming war that they help head off conflict.

Such decisive capabilities will be few and far between. Yet even if rather spectacular and operationally promising DCR options were to exist, crisis revelation may not be particularly valuable (relative to its cost) for at least three reasons.

1. Many different audiences will be viewing our actions. Ordinarily, the revelation of technical capabilities will probably impress only expert observers on low-echelon operational and intelligence staffs. As the implications percolate up toward top leadership levels—where intended "deterrees" reside—the apparent importance of the DCR could be distorted and diluted.
2. Nations almost always arrive at crises for political reasons. Even if revelation of a new capability changed an enemy's calculus of the balance, it may not dissuade him from executing what he sees to be politically imperative steps. "The balance" is a more or less crude measure of each side's standing in a certain competition and has little or nothing to do with the reasons for the competition.
3. Even if a revelation somehow arrests the course of a crisis, an ongoing long-term competition would probably continue. An adversary could be expected to take steps to contend with the revealed capability, and problems involving basic and irredeemably opposed interests could recur. There is no assurance that the new military situation would be any more in our favor than it had been before or after the original revelation.

Substantial deliberate capability revelation with the aim of influencing the enemy's behavior in a crisis probably will seldom, if ever, be worth the costs. Although such

revelations may have some application, in other words, their effectiveness is likely to be insufficient to arrest a crisis scenario.

A second possible application of DCRs would be revelation under less stressful conditions. Here, DCR schemes would have very different objectives. We would not expect any revelation to change the enemy's basic balance calculus. Rather, we might hope to render portions of his assessment process more uncertain, leaving him less confident about his understanding of our forces and perhaps inducing him to formulate more pessimistic forecasts about the results should he confront our military capabilities. Over the long run, this technique could indirectly enhance deterrence somewhat.

Revelations of previously unknown U.S. military capabilities could inject uncertainty into routine enemy estimates of our actual military potential. Having been surprised a few times, enemy planners might begin to worry more about yet-undetected U.S. capabilities. Potentially, enemy leaders could be made to distrust their staffs' assessments of U.S. military power. If so, the enemy may, in the net, be that much more reluctant to resort to attack as the "least risky" option in a crisis situation. Promoting a more cautious overall atmosphere by a judicious DCR program enables us to say that we were getting more deterrence effect out of our covert program dollars.

For the success of this kind of DCR program we would first need to understand in detail the enemy's assessment system. We would need channels for revelations that are credible to the enemy. We would need to maintain an overall picture of the enemy's knowledge and lack of knowledge of our capabilities. Most important, we would have to develop formal techniques for balancing the uncertain costs and benefits of prospective revelations.

These are very tall orders indeed. Hurdles to implementing too vigorous a DCR program along these lines include difficulties in coordinating among all the parties necessarily involved in any revelation decision; the tendency of an ongoing DCR enterprise to become too predictable or bureaucratic; a tendency to give away too much in the interests of sustaining an active DCR program; redoubtable complexities involved in predicting the outcomes of revelations; the critical need to avoid being dismissed as an inveterate schemer by the adversary; and the need to detect and evaluate enemy responses to U.S. DCRs quickly and accurately.

However great these obstacles may seem, there are still reasons to study the theory behind a potential peacetime DCR scheme in detail. For one thing, because the Soviets

fear U.S. technological prowess, a DCR may, probably on an occasional "target of opportunity" basis, influence important Soviet developmental or acquisition decisions. By understanding the nature of DCRs, we may also be in a better position to neutralize inadvertent leaks of our own sensitive capabilities. Some DCRs may help us fine-tune other intelligence methods. We may find that third parties can be influenced by low-cost U.S. DCRs. All in all, a closer look at the specific opportunities and pitfalls of a narrowly defined DCR concept seems warranted.

CONTENTS

I. INTRODUCTION

Over time, the United States has relied more and more on sophisticated, including some covert, military capabilities to counterbalance numerically superior Soviet forces. Many such capabilities are kept under wraps through lengthy development phases, and some continue to reside behind veils of secrecy even after they become operational. The roster of so-called "black programs" and related enterprises was once generally limited to certain intelligence and other special purpose systems. According to some sources, it has expanded considerably since 1980.[1] Today, certain "big ticket" front-line weapons systems—including the B-2A "stealth bomber" and at least two kinds of fighter aircraft—remain to a large degree covert.[2]

From time to time, the existence of such programs becomes widely known, or at least believed in, for various reasons. Some programs (e.g., the Stealth bomber or Advanced Cruise Missile) have appeared as formal budget line items for a while, but beyond their existence, little was officially revealed (program spending totals might have been blacked out). Other programs, while continuing to be protected even as to purpose, come to light during the course of defense planning and budgeting business as usual.[3] Still other line items, some with mysterious or vague code-names, remain secret in every respect. And budgets have contained much larger catch-all line items for "classified" or

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[1]The number, scale, and cost of such programs have apparently increased to such a degree that considerable debate about the degree of Congressional control over them has been stimulated. Political and industry publications have noted Capitol Hill discontent with an apparently reduced degree of official oversight. In defense, some DoD spokesmen have noted that classified programs tend to be less entangled in paperwork and unnecessary controls and may consequently be more efficient. For an authoritative account of recent developments, see David A. Morrison, "Pentagon's Top Secret 'Black' Budget has Skyrocketed During Reagan Years," *National Journal*, March 1, 1986, pp. 492–498.

[2]Both the Air Force and Navy have been developing stealthy fighter plans (the Advanced Tactical Fighter and Advanced Tactical Aircraft). In addition, a photograph was released late in 1988 of an "F-117" stealthy aircraft, previously classified completely.

[3]An apparent controversy over two loitering antiradiation drones, called "Tacit Rainbow" and "Seek Spinner," falls into this category. These programs were once completely protected line-items. Allegedly, defense politicking was one of the forces leading to revelation of the programs' purposes.

"special" programs. The point is that the numbers, costs, and types of restricted programs apparently grew considerably in this decade; the roster of such programs, moreover, now seems to include many front-line combat systems in addition to the traditional and special purpose ones.

To the extent that the Soviets have only a poor understanding, or none, of deliberately concealed, substantial U.S. military capabilities being designed and built out of view, their military balance assessments could be biased systematically. Ironically, the more successfully we conceal important combat capabilities, the more this bias could result in their *overestimation* of their military potential relative to our own. A distorted perception of the balance could affect us adversely if the Kremlin's expectation of military success in a war with the West were to be enhanced correspondingly.[4]

If that is the case, an interesting policy issue is how we might go about reaping more deterrent benefit from our classified endeavors without causing unacceptable harm. Could the United States ever find it worthwhile to *deliberately unveil* previously concealed capabilities with the aim of influencing adversaries' perceptions of U.S. military power for the sake of deterrence? The goal might even be of arresting a deteriorating crisis situation. In doing so, we would have to strike a balance between the need to strengthen deterrence and the need to preserve the military benefits continuing secrecy confers.

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[4]Inherent in that assertion are some basic assumptions about the nature of Soviet decisionmaking and the properties of deterrence. These assumptions generally favor a model of a fairly "rational" enemy and a fairly logical basis for mutual deterrence. This assumption is reconsidered below.

II. DELIBERATE CAPABILITY REVELATION AS A CONCEPT

DCR DEFINED

Deliberate capability revelation (DCR) means the intentional release of authentic information about previously covert U.S. military capabilities, with the aim of manipulating adversary military balance assessments.[1] DCRs, moreover, are not intended primarily to deceive the enemy into forming incorrect appreciations of U.S. military potential. Military capabilities in the sense of programs, force attributes, and the like are of interest, rather than matters of high-level policy, such as strategic intentions and aims.[2] Novel ways of using existing, apparent capabilities might in themselves be DCRs, depending on the context.[3]

WHAT IN PRINCIPLE MIGHT DCRS ACCOMPLISH?

The deterrent potential of a military capability is partly a function of the enemy's appreciation of the role that capability can play in helping defeat, compromise, or render too costly his contemplated attack or other aggressive action. But in the modern military setting, the United States relies more and more on sensitive, often covert, capabilities to help compensate for increasingly capable and historically more numerous Soviet forces. When such capabilities are concealed, we run the risk of contributing to the systematic

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[1]Covert is specified, rather than surreptitious. The existence and purpose of surreptitious (or clandestine) undertakings may be well-known, although certain specific details of the activity in question are protected, whereas even the existence and aims of covert programs are generally supposed to be closely held.

[2]Substantial ambiguities exist that might sometimes overthrow the pure, refined treatment of DCRs. In practise, it will be impossible to completely control what the enemy is able to learn about our programs: It will not be possible to exclude the effects of leaks, deception, etc. from the analysis. These, however, are contextual and not pertinent to the present conceptual evaluation of DCR policy. Also specifically excluded from this discussion are capabilities that result from plans *not* utilizing U.S. defense systems.

[3]For instance, the United States could try to secretly create a rapidly deployable combat contingent manned by or located in some third nation. Alternatively, the United States could secretly perfect new operational tactics. However, although the revelation of such capabilities might be startling to an enemy, they do not fulfill the criteria of being both a strategic arrangement and not involving U.S. systems, so they will not be considered here.

underestimation by a possibly too complacent enemy of our military power compared with his own.[4]

In these circumstances, an intriguing policy issue is whether and how we might selectively reveal covert capabilities to enhance deterrence. Such a tactic in principle poses a problem of balancing the additional deterrence against adverse consequences attendant upon such a disclosure.

Two kinds of information are important in investigating this problem. First, we need understand the costs of a revelation. Programs may be concealed for many reasons—justifiable and not so justifiable—but we would conceal certain programs from the Soviets *mainly* because their unawareness yields some operational advantage. In general, the objective probably is to prevent the Soviets from taking compensatory countersteps in advance, be these changes in technology, posture, doctrine, or tactics. Presumably, when a decision to conceal one of our programs is made in the first place, it is based on a fairly reasonable understanding of the damage to the national security if that capability is disclosed. Thus, from a DCR planning point of view, the *costs* and other related results of disclosure presumably are usually well-known whether or not we subscribe to anything like a DCR option.[5]

The other side of the equation—the effect upon an adversary produced by the unveiling (abrupt or otherwise) of some noteworthy military capability—is, conversely, a very uncertain analytic matter. Perhaps the most important question involved is whether and how the injection of some new technical consideration into the enemy net assessment process would affect his behavior in an emergency. Here it is useful to distinguish between enemy decisionmaking in crises and more routine decisionmaking.

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[4]*If* the enemy is very conservative and *if* he respects our superiority in certain areas (notably our technology in general), then an array of unknown but perhaps substantial military capabilities may frighten him and even promote an increased measure of deterrence. That is reserved for discussion later on.

[5]There are costs of restricting access to programs. The more closely a program is held, the higher these costs might be. Classification of programs therefore *should* involve some kind of tradeoff that weighs the extra costs of concealing activities against the military advantages of doing so. This "calculus" is not an unfamiliar management problem, then. Some commentators allege that there are cost-effectiveness *advantages* in running a program on a "black" basis: The program somehow divests itself of unnecessary management impediments and can proceed more quickly and at lower cost. Historical experience at the Lockheed "Skunk Works" in building the U-2 is commonly cited in support of this claim. But this analogy may not extend to the modern defense planning setting. The matter is in any event beyond the scope of this discussion.

Ideally, we would be able to reveal some fearsome capability at some pivotal point in a crisis so as to prevent an undesirable chain of events, perhaps even a drift to war. Intuitively, candidate capabilities of this variety would be shocking, credible, comprehensible to top adversary political leaders (not just to technical or operational echelons), and so on. In brief, such DCRs should be perceived as likely to play a sufficiently central role in a coming war that their mere demonstration may help prevent conflict. The capability revealed would not have to be absolutely decisive: In the heat of a crisis, stark events may be invested with more importance than they really merit. (The reverse may also be true.)

This model of a DCR process is quite simple: An adversary, contemplating an attack that he believed could accomplish his basic strategic aims (given the prevailing military balance) would be confronted with a "show-stopper" capability he had not known about before. The introduction of that capability promptly invalidates his basic balance assessments, and the scales tip against an aggressive decision (or, as a less ambitious outcome, the DCR might lead the enemy to be aggressive in a certain "more desirable" way).

A second possible application of DCRs involves revelation under less rigorous and stressful conditions. Here, a DCR scheme would have very different objectives. A revelation would not change an enemy's basic strategic calculus or influence any fundamental political or strategic conclusion to which he had already tended to come. Rather, portions of his overall net assessment process might be rendered more uncertain, leaving him less confident about his understanding of our forces and *perhaps* leading him to overestimate our overall military capability. An atmosphere of increased caution and concern by means of a judicious DCR program may give us more deterrence effect out of our covert program dollars. This would not only enhance deterrence generally, but also validate covert programs from a cost effectiveness point of view.

How well we might do by DCR in practice would depend on several often highly uncertain and complicated factors, including our understanding of the enemy's contemporary net assessment process, the features of the scenario in which a DCR option is contemplated, and our ability to effectively coordinate many U.S. governmental processes. But most important of all are the complex reasons behind a nation's decision to go to war (rather than attempt to appease its enemies or avoid the commitment of vital national interests that may have to be defended). These latter points will effectively drive the configuration of any DCR scheme.

A FEW TERMS OF REFERENCE FOR ANALYSIS

Some "priors" will prove useful in bounding the analysis.

- First, we probably will be interested in the revelation of tangible items of technology or entire systems (which, for lack of better terminology, are henceforth known as "gadgets") rather than classified employment plans, strategic aims, joint agreements, etc.
- Second, although a completely covert undertaking may have no deterrent value until certain of its capabilities are known, not every single attribute of a covert system or capability need be unveiled.
- Third, by concentrating on hardware and specific capabilities, we acknowledge the often narrow focus of any revelation within the context of our military objectives. Compared with, say, strategic goals, unveiling program-related information would lack relevance to more than some fairly specific military balance. In other words, DCRs are specialized, not general purpose, devices.
- Fourth, most capabilities of interest are covert because their *tactical or operational effectiveness* depends on characteristics that an opponent can counter given sufficient time and will. DCRs of technical program attributes would not decay in a step-function fashion. Indeed, DCRs could vary greatly in utility with respect to the sequence of events that may follow a revelation, and in turn, to the degradation path of the remaining "shelf life" of a candidate for DCR.

SOME PREREQUISITES OF A DCR SCHEME

Regardless of our goals and the DCR technique selected, to successfully carry out such a program, we would first need to understand the enemy's assessment system. We would need channels and devices for revelations that are credible. We would need an overall picture of the enemy's knowledge and, more important, ignorance of our capabilities. And we would require a formal way to balance the uncertain costs and benefits of a prospective revelation.

Although DCR seems at first glance to hold out some potential for effective deterrence enhancement (primarily in crises when shifts in the apparent military balance

would seem to be endowed with special importance), I believe that DCR should not be expected to enhance deterrence very much in a crisis situation. This is probably an immutable consequence of the determinants of national choice at a strategic level in crisis and routine situations alike. Additional hurdles to reconciling the possible costs and advantages of a DCR include: difficulties in coordinating among the parties involved; the possible tendency of ongoing DCR enterprises to become too inflexible; the tendency to give away too much in the interests of sustaining an active and creative DCR program; the complexities involved in predicting and assessing the consequences of a revelation; the critical need to prevent the enemy from dismissing one as a pathological schemer and habitual manipulator; and the need to detect and evaluate enemy responses to U.S. DCRs quickly and accurately.

These difficulties mean that, except in extreme situations, DCRs probably will *not* be useful in crisis situations. They may even be harmful even in those extreme cases where we do possess capabilities that once revealed might tangibly change an enemy's impression of some key military balance.

DCRs may have some limited promise as a means of keeping routine Soviet long-range planning and assessment activities (in particular strategic planning and assessment efforts concerned with identifying areas for future technological initiatives) off balance in ways that could work to our advantage. However intractable certain implementation matters may be, there are good reasons to understand the theory behind peacetime DCR. For one thing, because the Soviets greatly fear U.S. technological superiority, DCRs may influence important Soviet R&D or acquisition decisions. By understanding the nature of DCRs, we may also be in a better position to exploit *inadvertent* leaks of our own sensitive capabilities. Selected DCRs may help us fine-tune other intelligence methods. It may be possible to influence certain third parties by using low-cost U.S. DCRs. A closer look at the specific opportunities and pitfalls of DCR concepts is certainly warranted.

III. HOW CAN COVERT CAPABILITIES BE USED TO ENHANCE DETERRENCE?

If a military capability is really covert, it can have no deterrent value. In the film *Dr. Strangelove*, for instance, the Soviets have secretly constructed a "Doomsday Device" to opt out of the arms race but had not informed the United States to this effect when a deranged SAC commander launches his B-52s against the USSR. Pointing out the obvious nondeterrence quality of the concealed Doomsday Device, Presidential advisor Strangelove demands an explanation of Kremlin behavior from the Soviet ambassador. The lame reply: "It [the Doomsday Device] was to be announced at the Party Congress next Monday. The Chairman loves surprises."

As Dr. Strangelove explained the not very subtle strategic aspects of the incident, the problems of trying to use covert capabilities to enhance deterrence border on the trivial: Truly hidden capabilities cannot deter enemy actions. Only capabilities of which the enemy is aware—and of these, only those that are relevant in some meaningful security context—ordinarily would enter into either side's continuing calculations of the outcomes of any hypothetical military confrontation.

Enemy intelligence functionaries continuously monitor our various defense activities to determine our strength, and his net assessors try to compare our capabilities with his own to develop a systematic description of the military balance. The resulting "balance" can be contemplated and analyzed and given assumptions about the balance and many other things, possible outcomes of a clash can be developed. The results of such contingency analyses contribute to the all-important phenomenon of deterrence.

By concealing some important capabilities we may be keeping them out of the enemy's calculations to some degree, thereby possibly tilting the balance (as he sees it) in his favor. Conceivably, the enemy's failure to account for all of the components of our posture may increase his own optimism about the chances for success in a military confrontation. All things being equal, this could make the difference between a technically based recommendation to attack (or take some other serious risks) and one not to.

Consequently, adding to the state of an enemy's knowledge about our defense potential should theoretically be expected to enhance deterrence. But in practice, can

deterrence be so enhanced? Put another way, how effective could any DCR be in supporting either of the following two tasks: (1) heading off or managing a major crisis, (2) changing the enemy's assessment of and opinions about the apparent military balance. A few extremely bizarre scenarios aside, DCR has little role to play in the deflection or management of crisis situations. The basis for the probable *failure* of crisis management DCRs depends centrally on:

- The importance the enemy attributes to the capability revealed
- The identity of those members of the adversary's defense establishment who witness and assess the DCR
- The countermeasures the enemy might activate after viewing a DCR.

WHAT SIGNIFICANCE WILL DCR HAVE FOR THE ENEMY?

As planners contemplating a DCR, our first duty should be to assess its utility in impressing adversary leadership. But by what means can we determine whether an enemy might attribute much importance to a newly revealed capability? How confident can we be in our estimates that a revelation will impress him, rather than only interesting or confusing him? Could an enemy even view our DCR as a bluff or indication of desperation?

Being sure that we do achieve desired results is especially important if the capability we decide to compromise is a very valuable one or if we stake much prestige on the revelation. We want to be especially careful to avoid building up a revelation in advance, only to encounter a blase reaction by the other side. Indeed, a *deceptively* languid or apathetic enemy reaction to some DCR is a prospect we must anticipate and be able to detect with high confidence.[1] We also do not want to reveal something we thought had been covert, only to discover that an enemy was already aware of it, or worse had taken steps to counter it. Unless we can correlate audiences and predicted effects with some reliability, we will swiftly discover DCR to be a two-edged sword.

The intrinsic significance of any DCR is primarily a function of three clusters of factors. First, the specifics of the crisis situation are very important. For instance, if it were decided to implement a DCR in a primarily naval crisis, it probably would pay to

[1]Stalin, for instance, pretended to be unimpressed by the U.S. atomic bomb—at least until the USSR had acquired some.

reveal an impressive maritime capability; to do otherwise might only waste a valuable concealed capability.

Second, shock value is a function of the enemy's actual knowledge of our capability (of which we will have an incomplete understanding at best). Depending on the enemy's awareness of a candidate for revelation, we might be able to successfully pursue a DCR option with only a partial unveiling of its characteristics.

Finally, shock value depends on a certain set of uncontrollables, many being political or bureaucratic, not technical. Are factions competing for ascendancy in the enemy government, or is there a high degree of leadership consensus (would our DCR be selectively ignored or used as a weapon by one internal adversary faction or another)? Are several crises brewing at once (will technical balance considerations be eclipsed by larger strategic ones)? Is enemy leadership overly perturbed, maybe drifting toward a "now-or-never" threshold? Are an enemy's allies defecting or closing up ranks? In planning for a DCR, we need take explicitly into account such varied factors to achieve the proper degree and the optimal targeting of available "shock potential."

WHAT CAPABILITIES MIGHT MAKE FOR EFFECTIVE DCRS?

Mindful of such requirements, what characteristics should we require from a candidate DCR? The archetypal case of a truly covert yet redoubtable military development was the atomic bomb. Security on the project was tight. Even if some components of the Manhattan project could be surmised or had leaked out, so many interlocking issues were involved that enemy access to discrete compartments of technical data would not have painted a very rich picture of the nature of the entire project. Finally, some key questions (one being weapon effects) were poorly understood even by those with access to all available data.

The A-bomb was also a stark development in the more fundamental sense. Coming even at the end of the most destructive and large-scale war in history, it was to command global attention. The basic implications could be immediately digested by most audiences. The A-bomb would seem as close to an ideal potential DCR instrument as anyone could imagine. Some debate transpired before the Hiroshima bombing as to

whether the Pacific War could be ended simply by demonstrating the weapon's power to Japanese leaders, say, by blasting an unpopulated atoll.[2]

Yet although journalists are fond of characterizing each new weapon development as nothing less than "the most significant since the atomic bomb," we should ask just how similar to it any historical or as-yet unrevealed new capabilities might actually be. I suggest that the atomic bomb probably is unique in the annals of modern history. It is, indeed, probably impossible to conjure up even hypothetical capabilities that satisfy the following four *a priori* requirements:

1. Be so distinct compared with other comprehended activities that the capability is not characterizable or predictable in advance to a degree that tends to dilute its shock potential. Now, much is ordinarily involved in "weaponizing" a technology, training its operators, fielding a logistical support structure, etc.[3] Moreover, indications of interest in a type of capability will presage the actual appearance of programs and identifiable hardware, often by a long time.[4]
2. Be so significant or startling that they will rattle enemy leadership. Most weapon developments make it easier to carry out existing military missions. Since there tend to be many ways to accomplish a given objective, measures intended to counter other means for performing a like mission may be redirected to undo or neutralize a DCR in less time than would be required were the DCR to be some true technological *deus ex machina.*[5] Similarly, the

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[2]Some Soviets allege, as do some revisionist historians, that the true purpose of the attacks on Hiroshima and Nagasaki was to deter the USSR from territorial expansion in Asia and elsewhere. In that sense, the A-bomb was an authentic DCR, though one used in wartime.

[3]Even if the Soviet Union could construct a big deck aircraft carrier in absolute secrecy, for instance, it would take many years to satisfy the very rigorous requirements for carrier flight operations (in terms of personnel skills, materiel, etc.); these other activities presumably would betray the ship's existence.

[4]Some discussion has addressed technological concepts that have subsequently "dropped out of sight" once major clandestine programs move into gear: The early U.S. military space program is a classic case in point.

[5]Suppose we could covertly build a fleet of stealthy interdictors. If the Soviets were unable to shoot them down, they would just devote that much more effort to air base attack, passive defense, dispersal and maneuver, etc.

linchpin in a successful total force package could be an otherwise unimpressive system.[6]

3. Be sufficiently secure that we have confidence the enemy has not penetrated the secret and adjusted to or even already countered it in advance. Obviously if this occurs, the net effect of a revelation could be negative.
4. Have a sufficiently predictable intended effect that planners can have high confidence the DCR would produce an intended decisive impression on the enemy (thereby avoiding the kind of situation in which a disclosed capability produces a result wildly inconsistent with the prestige that may be staked upon). The historical record is littered with weapons concepts that did *not* live up to their supposed potential. For example, before World War II it was widely supposed that strategic air bombardment could, even against organized defenses, bring an enemy to its knees in short order. However, no realistic experiments were done to test this hypothesis, and early wartime experience on both sides was disappointing (compared with prewar expectations).[7]

Together, this collection of traits and qualities suggests some demanding tests for a DCR under consideration. Most weapons or similar developments, even quite outstanding ones, would not ordinarily satisfy such criteria as are implied here.

Such decisive capabilities will be few and far between, particularly when it comes to the most likely scenarios. But even if rather spectacular DCR examples are concocted, crisis revelation may still not be particularly valuable relative to the down-side costs. Prudent military planners do not often put themselves in situations where very severe bolts from the blue would overturn their plans.

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[6]For example, the Syrians knew that the Israeli Air Force was a high quality one before their 1982 Beka'a Valley air war debacle. But IAF fighters could not have achieved their great successes without the assistance of other systems: early warning and ECM systems, drones, etc. Viewed in isolation, none of these capabilities might have seemed so pivotal that a Syrian air fiasco seemed foreordained. However, such revelations *would* have had a potentially very negative effect as far as the Israelis were concerned.

[7]Recall, also, the mid-1960s GIANT PATRIOT test program for MINUTEMAN: Four test launches of short burn ICBMs from operational silos were unimpressive. Subsequently, problems were said to have been "fixed"—but no other testing has occurred, largely because planners were extremely sensitive about the wrong signals that more failures could send.

Hypothetical cases can certainly be designed to violate the foregoing rules. For example, a radical breakthrough in antisubmarine warfare (ASW) might render the oceans "transparent." We could conspicuously unveil this capability by simultaneously dropping pinging sonobuoys directly over every deployed Soviet submarine. But taken in context (as we shall see below), the reactions to such a dramatic step are liable to produce adverse results that may well outweigh probable gains. In short, although it is possible to imagine truly *important* DCRs, that is only one aspect of the problem.

TO WHAT AUDIENCES DO DCRS PLAY?

A second important question about the possible crisis employment of DCRs concerns *who* forms what impression about the implications of a revealed capability. So far, I have referred to a homogeneous "enemy" but clearly there are several different audiences. For instance, the demonstration of a very capable U.S. nonacoustic ASW sensor would differently affect a Soviet submarine fleet commander, an air force general, the head of military R&D, a political adviser, and so on. Many observers may have opinions, but only a few will be making decisions. To deter "the enemy" we have to influence *those* people.

Addressing and influencing top enemy leadership directly is the key aim in any attempt to fortify deterrence. In general, the magnitude of effect we can hope for probably relates inversely to the extent to which the DCR consists of some program or force attribute.[8] In other words, the more meaningful and digestible our DCR, the more technical it may have to be. In turn, lower ranking echelons in the enemy decisionmaking apparatus may be most strongly affected thereby. A DCR strategy will (a few extremely rare exceptions such as the atomic bomb aside) be aimed at enemy leaders through the indirect route of his supporting assessment, intelligence, and operational planning staffs.

Although in principle it may seem easy to reach enemy leaders *indirectly* by targeting DCRs against supporting bureaucracy, several factors combine to dilute or distort the possible ultimate effects we can achieve. The most serious of these relates to the great number and variety of participants in the enemy's national security hierarchy. Given many diverse organizational entities and roles, multiple communications channels, and a wide range of individual agency agendas and motives, the effect of a DCR could

[8]Rather than some strategic intention or aim.

tend to be diluted and even distorted as it passes up through channels for leadership consumption.

Most operational level personnel are concerned with fairly specific analytic and other issues. It is in the nature of all specialized bureaucracies to presume their situation to be especially deserving of, among other things, high-level financial and political support. Routinely, then, superior decisionmaking echelons may be inundated with ominous reports about enemy capabilities made in support of proposed programs and plans. Reliably distinguishing incoming DCR from the normal pattern of intragovernment communications may be difficult unless the DCR is truly striking or is cleverly and precisely targeted.

In many cases, this "signal to noise" problem will be exacerbated by the fact that the U.S.-Soviet competition in many key areas is an on-going measures/countermeasures game that lacks easily identifiable benchmarks. Moreover, there will usually be substitutes for any friendly capability jeopardized or neutralized by some DCR. For instance, if one's tanks could somehow be rendered impotent in their antitank role, missiles, mines, artillery, helicopters, and fixed wing aircraft remain to carry on in this mission.

Given a range of participants with often competitive motives, then, the DCR will be distorted as its implications are debated by many people, only some of whom probably care much about the DCR. One outcome of subsequent distortion could be the discrediting of the DCR in the eyes of top leadership. The ongoing competition for budgetary representation may cause manipulation of data and assessments, which would tend to dilute the importance of the DCR in high-level eyes.[9]

The diversity of audiences at operational levels clearly complicates DCR planning. But even if we could devise a revelation that was effective for all services, there is an even greater DCR planning problem. The most important variables of all involve the motivations and behavior of audiences at policy, not operational, levels. Top commanders and intelligence officers have profoundly different jobs and perspectives, and they will be affected by DCRs in different ways. This distinction is absolutely critical and must be at the heart of any DCR policy.

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[9]For example, suppose that the Soviet Air Force detects a striking new USAF capability requiring some expensive response. Their superiors might view an appeal for resources skeptically because of their frequent use of pessimistic briefings to promote funding requests.

WHAT ADVERSARY RESPONSES FOLLOW OUR DCR?

No matter what echelon of the enemy's security apparatus we are able to influence, we have to be concerned with the chain of events that might follow a U.S. revelation. The enemy's response will be shaped by his internal debate over and decisions about the meaning, significance, and motives of a revelation; by technical and timing constraints; by political factors; by chance; by the availability of countermeasures on different schedules; etc.

Suppose that we unveil an impressive capability in the midst of a deteriorating international situation and that this revelation accomplishes the desired effect of arresting the crisis. The enemy will not be deterred by this capability indefinitely. He might well respond by trying to counter the development, acquire it himself, devise alternative compensatory strategies, etc. Even worse, if our revealed capability is sufficiently threatening, the enemy may act preemptively to neutralize the capability or to attain the goal our capability seeks to frustrate.

If we successfully influence the enemy, and he does not react precipitously, he will almost certainly take steps to deal with the DCR over the long run. What is vital here, as we shall see below in more detail, is the importance of the point of contention. It is only reasonable to be concerned that we may again drift toward conflict.[10] We should avoid the temptation to put too much faith in the *enduring* deterrent power of any revealed capability. The salient questions then concern the interaction of enemy efforts to defeat, emulate, or neutralize our capability and our efforts to, in effect, "keep one step ahead."

ARE THERE EXCEPTIONS TO THE RULES? AND HOW SHOULD THEY BE HANDLED?

These three issues—the significance the enemy might attach to a DCR, the audiences that witness it, and the enemy's reactions to it—are the most important determinants of planning for deliberate capability revelation in a crisis. However, the practical difficulties inherent in these considerations do not rule out the possibility that DCRs *can* be conceived of that deter some enemy action or other upon unveiling. Thus,

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[10]See Kevin N. Lewis and Mark A. Lorell, "Confidence Building Measures: What Does the Historical Record Suggest?" *Orbis*, Summer 1984, for detailed background discussion on this point.

we need consider why even quite powerful DCRs cannot often be reasonably expected to shape a crisis to the extent that the costs of revealing a capability may be approximately balanced. To do so, it is necessary to consider briefly certain features of the generic deterrence problem.

Since our purpose is to deter enemy aggression (as well as control escalation should it begin), we need consider the ways in which our adversaries' understanding of our military capabilities might or might not contribute to strengthened deterrence.

First, we can reveal something that aims to affect the enemy leadership's calculations of the costs of attack, risks in aggressive political action, or estimates of the probability of certain military outcomes *once a crisis situation has arisen.* This kind of action at its core essentially views enemy calculations about the "advantages" of aggression in rational economic terms. Some merchandise is worth buying at $1.00, but costs too much at $1.25. Similarly, the Soviet Air Force would take on a USAF equipped with F-4s, but not F-15s (or Advanced Tactical Fighters). In this schema, we are basically just trying to affect his overall utility scale for aggressive decisionmaking by changing the contemporary manifestation of the balance.

The second kind of deterrence dynamic relates more to his routine estimates of our military potential. Here, a DCR program would generally try to inject extra uncertainty into the adversary's *day to day calculations.* The basic idea is to take advantage of the conservative tendencies of most defense planners with the aim of undermining an enemy's confidence in his understanding of the balance.

As we consider the utility of DCR to enhance our deterrent potential and so halt the movement of crises toward war, my main concern is with the first of these alternative deterrence dynamics. The next section demonstrates why DCRs applied toward this particular end are not promising options.

IV. DIRECT DISCLOSURE AS A MEANS OF ENHANCING DETERRENCE: COULD IT WORK?

I suggested above that atomic bomb types of capabilities—ones that are concealable; can be revealed in sudden, dramatic, and easy to understand flourishes; and that make big military differences—are likely to be few and far between, if, indeed, there are any. It may be very hard to predict how different echelons of the enemy's decisionmaking apparatus will respond to any revelation. But what is reasonably probable is that we would not usually be able to reveal anything that directly and decisively shocks the people whose views and decisions really count. Ordinarily we would have to try to influence their support staffs and hope that this in turn indirectly affects higher level deliberations.

For the sake of argument, suppose that the gravity of a revelation registers adequately upon our adversary's leadership—what then? How does that revelation affect their strategic decisions? How will their new knowledge deter them or force a change in their plans? It is helpful to sketch out a few unarguably dramatic covert U.S. capabilities (these generally meet the criteria for DCR suggested above):[1]

- *A capability to decapitate some major fraction of the USSR's leadership structure, regardless of countermeasures taken.* This is truly a profound capability—so much so that it might not ever be wise to reveal it regardless of the seriousness of a crisis. This hypothetical threat can—and probably is—met by devolution of command and other preplanning arrangements. If possible to implement, it would represent an extraordinary threat to enemy leadership, precisely the group we wish to deter. This may therefore be a decisive DCR option.
- *A capability to reliably thwart any Soviet initiative to do the same to us.* Again, a powerful capability, and one that, if suspected, might lead to preemption in crisis, not increased deterrence, and it can also be countered by existing protocols. But as before, if enemy plans were to depend on a

[1] I am indebted to RAND colleague James Winnefeld for this imaginative and formidable list of capabilities.

decapitation strike, this capability would be a true "show stopper" for a Kremlin planner contemplating the prospects for success of his attack.

- *A capability to absolutely deny the USSR's use of Eastern European Ground Lines of Communication (GLOCs) early in a war (for instance, with a force of stealth interdiction aircraft armed with precision weaponry).* How would it be possible to demonstrate this capability short of executing it completely? It would also not in itself hedge against alternative mobility concepts, notably prepositioning. And it is uncertain whether an armada of U.S. forces could be held closely but at proper forward locations. Unless a short war in Europe were to be assured, such a complete interdiction capability would spell Pact defeat.
- *A capability to influence or control weather over a regional area.* A spectacular capability to be sure, but there would be problems with matching cause (the use of the capability) and effect (changed weather) in such a way that the Soviets were certain we could do what we threatened. Such a capability would be most useful only if coordinated carefully in advance with friendly force elements who would be subject to possibly identical environmental effects. But this again is potentially so striking a capability that the enemy would back off even if the military effects of the revelation alone were not in themselves pivotal.

These are just a few "thought experiment" capabilities that conceivably could stop an aggressively minded opponent in his tracks. To what extent could these, or analogous DCRs, be counted on to accomplish any particular policy goal with a certain degree of confidence?

CAN DCR BE COUNTED ON TO INFLUENCE THE ENEMY'S CRISIS DECISIONMAKING?

The most important question to be considered in deterrent planning of any kind concerns the mechanisms by which a nation's top level strategic estimates and executive decisions are formed. Nations go to war, appease, delay, do nothing, or take peacetime risks for many reasons. Nations are sometimes aggressive when they are outclassed militarily. They have appeased or have been indecisive despite military superiority.

Developments in Europe preceding the outbreak of the full-scale hostilities of World War II provide numerous excellent examples.

In light of the historical record, one is entitled to ask what advantage there is to forcing enemy staffs to recast their interpretations of some aspect of the balance. In a crisis such assessments may have little effect on sources of friction, which may be laid to fundamentally opposed interests, the inevitable flow of events, and often abstract and occasionally self-deluding assessments of enemy "will" and "resolve." The lack of predictable one-to-one correspondence between technical military assessment and political consequence makes DCR planning for crises difficult and uncertain. Although the sudden revelation of some dramatic capability may startle an enemy, we need recall that the balance is merely a measure of the competition and not the reason for it.

EVIDENCE AGAINST THE EFFECTS OF DCR USED IN CRISES: A TALE

A simple scenario suggests how even the atomic bomb—apparently the ideal DCR device for a crisis situation—may not have produced lasting (or even very good initial) results given the nature of the contemporary strategic situation. At that time, the fundamental interests of the key antagonists were on an irreversible collision course. Certainly conflict *might* have been averted by demonstrating a nuclear capability in the late 1930s. However, at best, a showdown would only have been postponed barring a reconfiguration of basic national interests. Such a notable DCR may even have imparted some new impetus to the drift to war.

Coming as a surprise to nearly everyone, the A-bomb did not directly deter anything; it would be difficult to deter, in the usual sense, an enemy with whom you are already engaged in total war. It is not even clear just how much the Bomb contributed toward ending World War II: The combination of more than a decade of war; massive U.S. industrial superiority; three years of a very successful submarine blockade and over a year of devastating strategic bombing; the freeing up of U.S., Soviet, and other forces previously assigned to Europe after May 1945; and the complete collapse of the Japanese strategic position overall had forecordained its defeat.[2]

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[2]One hears estimates about the Bomb's shortening of the war that typically run to one to two years. Estimated casualties averted by surrender (because of direct invasion of the Japanese Home Islands) are on the order of one million. Such estimates are speculative,

But for the sake of this discussion, imagine that World War II had not started, yet the United States had secretly developed the Bomb anyway. Suppose, moreover, that we were willing to loan some of our (highly limited) stockpile of these weapons to the British before Munich. In light of this concealed capability, perhaps, the Allies elect not to appease Hitler. Might a tougher Western stand have "prevented" World War II? Of course, we can only speculate on this, but the fact remains that in World War II (as in World War I), fundamental and irreconcilable interests were on the line. What were at stake were such hard to gloss over questions as: Who should enjoy what degree of influence on the Continent; how economic, imperial, and territorial ambitions on a global scale should be governed; how controversies relating to evolving military balances should be resolved; differences in ideology; and so on. The question remaining, then, is how any weapon, even one as formidable as the Bomb, would have materially reshaped this volatile strategic context.

It is debatable whether the existence of poison gas, airplanes, tanks, machine guns, and so on—including even the Atom Bomb—could make much deterrent difference over the long run when truly fundamental interests are at loggerheads. The case can be made that once essential national interests are pitted against each other, all that any weapon or, more broadly, capability could do would be to affect the timing of a scenario and perhaps influence strategy and tactics. Even this may be too much to expect. For instance, it has been argued that the massive slaughter in World War I as a consequence of the improved firepower of machine guns, rapid firing artillery, gas, etc. did little to change operational concepts on the Western Front over most of the war, never mind rewrite the underlying strategic script. One is entitled to ask why an undemonstrated and unfamiliar capability should carry much weight when demonstrated ones often don't.

But to return to the story. In negotiations, suppose that the British refer to mysterious "secret weapons." But Hitler, doubting British intentions, invades Czechoslovakia and Poland nonetheless. It is clear that more Nazi aggression is in the offing and so the Allies must come up with some kind of plan. Now the British face a grim dilemma regarding the problem of how to exploit the deterrent value of the as-yet

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as is the basis for them. If one looks at Japan's net military position and the potential at the disposal of the Allies, the Japanese *could* have played a suicidal spoiler role; but from any rational point of view, Japan's home front was truly on the brink of collapse. The effect the Atomic Bomb had on truncating the war might, in some sense, be not unlike that effect yielded by the breaking of the Japanese code system early in the war.

covert Bomb. They must demonstrate their determination to the Germans, but they are not quite sure how the Bomb affects the military situation as everyone has comprehended it up until then.

To resolve the question, a special high-level committee is convened to review the options. The issues are how to convey to Hitler the military risks he runs and and not betray the vital capability (recall that there might not be many A-bombs available to the British). Rather than unveil the Bomb, it might be proposed to reveal to German scientists certain important theoretic breakthroughs on the physics of nuclear energy pertinent to weapon applications. But it is determined that the Germans probably know enough not to be impressed and that, in any case, it wouldn't be too apparent whether the Germans would believe that such a demonstration of theory meant that a working Bomb was in British hands. A more persuasive step must be taken.

The British have discovered that the Germans are secretly working on their own atomic program but know them to be having trouble. Therefore, they contemplate showing the German designers a trick they may not have solved to prove that the West was in possession of a functioning device. This technique is rapidly rejected because that may be placing a missing link in the hands of the German designers. Moreover, such a demonstration is not deemed certain to prove to the Germans that the West had solved *all* design problems. Furthermore, it is decided that this would not be a sufficiently strong gesture. After all, what is at stake is nothing less than global war: Something decisive must be done, and the Bomb must figure in such a demonstration. Anything less, it is argued, would just reinforce suspicions of some adventurist German politicians that the West couldn't really have this capability.

This leads to consideration of a demonstration shot in some out-of-the-way area. That is certainly a far more striking revelation, but there are strings attached thereto even so. Were the demonstration not to work, the British would really then be in trouble. Furthermore, such a shot might not in itself be proof positive that the West possessed an *operational* weapon system, one that could really be used to deliver atomic bombs properly in a combat setting. And finally, by holding back from an attack on some legitimate military targets, the British worry that they may be just proving that we are afraid of really getting into a fight.

Escalation in the possible configuration of a demonstration shot follows, leading to consideration of a "shot across the bow"—attacking some German target or other,

military or civilian, it might not matter, as long as the demonstration revealed a profound military capability. Unquestionably, the use of the Bomb against a "real" target would prove that the British meant business. However, the British then worry that because even the Americans who fabricated this weapon don't understand nuclear effects very well, the more skeptical Germans might not properly assimilate the demonstration. Nor is the relationship of atomic bombing to other military activities well understood from an operational perspective, despite (let us suppose) secret American weapon testing.[3] Then there is the question of which target to bomb for maximum military as well as psychological effectiveness, given the modest size of the on-hand nuclear stockpile.

The planners not only have to concur with this but also weigh the prospect that the Luftwaffe would subsequently argue successfully to Hitler that they could shoot down enough of the RAF's bombers (or that other techniques, such as special forces attacks, could neutralize much of the U.K.'s stockpile). Some might believe that civil defense could mitigate the effects of even nuclear bombing.[4]

That raises the question of what happens if the initial demonstration does not succeed. Then the war would be on. Because not many atomic bombs are available, and if some planes were to be shot down or otherwise neutralized, and if bombing accuracy were to be as bad for A-bombs as for conventional attack, then a British nuclear offensive against Nazi Germany might not do too much damage, no more, anyway, than

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[3]After all, it has been reported that the American Navy has challenged the probable effects of atomic bombing, chiefly in response to Air Force claims that they could win a war single-handed with atomic weapons and therefore be the budgetary beneficiary. After the war, for instance, a Navy representative advised a Congressional panel that they could stand at the end of one runway at National Airport with "no more protection than the clothes you now have on, and have an atom bomb explode at the other end of the runway without serious injury to you." See Hearings before the Committee on Armed Services, "The National Defense Program—Unification and Strategy," U.S. House of Representatives, 81st Cong., 1st Sess., October 1949, p. 170.

[4]Some observers believe that the power of the atomic bomb was overestimated, as had been the destructive potential of high explosive bombs before World War II. Blackett described the RAF misestimation of conventional air attack as "one of the greatest numerical blunders of military history," and he later leveled the same indictment against proponents of atom weapons. "A determined folk will learn to stand atomic bombardment, if that is their fate, just as the Germans learned to stand ordinary bombing on a scale up to fifty times larger than that which the enthusiasts for strategic bombing thought would bring about the collapse of their war effort." See P.M.S. Blackett, *Fear, War, and the Bomb: The Military and Political Consequences of Atomic Energy*, Whittlesey House, London, 1948.

a combined nonnuclear bomber offensive would do.[5] And also to be confronted are a range of political questions—for one, how such a demonstration might influence anxious neutralist leaning Americans who might be appalled by preemptive use along these lines (that is, an "unprovoked" attack of such massively destructive quality).

Finally, the most basic question remains: Suppose the demonstration—wherever and whatever it is—works. The Germans might immediately back down. But what then? They would inevitably build their own bomb, not to mention undertake other defense preparations. Such a step may have just delayed the war and might only have made it much more destructive when and if it were to come.

What this analogy demonstrates then, is how considerations of enhanced deterrence have led, not unreasonably, to a rather dead-end in which resort to preventive war—and not avoidance of conflict—may be the least unreasonable option. The reader can object to the pattern of this little scenario, *but the nominal technical value of that capability may be far from the most important consideration governing a decision to reveal it in a crisis.*

SOME PROPOSITIONS

The foregoing discussion does not in itself settle anything, but starting from some of its features, I shall list some propositions about the revelation of covert military capabilities in a crisis.

First, neither overt nor covert capabilities by themselves influence or redirect the overall forces impelling nations toward war to any appreciable degree when the stakes are great. As we study nations' decisions to go to war, we find horrendous examples of irrationality and self delusion—expectations that the enemy will not have the "will" to fight, that some trick would work, that the war would be "over by Christmas," etc. The Japanese decision to go to war with the United States in 1941 is a typical case in point. With this record in mind, in some respects a crisis-oriented DCR scheme may become yet another dangerous crisis-time panacea.

Second, peacetime assessments can be quite wrong. Capabilities are sometimes understated. In the late 1930s, for instance, U.S. naval officers believed that aerial

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[5]And as we now know, Germany's ability to stand up (both socially and economically) to very destructive conventional bombing was vastly greater than anyone expected.

torpedo attacks against ships in shallow waters were impossible. Pearl Harbor therefore came as a surprise, even though British Fairey Swordfish aircraft had sunk three Italian battleships at Taranto the previous year in a similar setting. Misinterpretation of data and misreading of lessons sometimes also leads to overestimation of capabilities that as often as not cause serious problems to even the capability's owner. One set of cases in point relates to the presumed effectiveness of untested instruments of modern air power. In the late 1930s, strategic conventional bombing against organized defenses was expected to yield results approximating those of atomic bombing. Three decades later, the effects of aerial interdiction in Vietnam were likewise overestimated.

Third, the effects of revealing some important covert capability are liable to be ephemeral, and a covert capability, once revealed, may be replicated or neutralized by the enemy—perhaps even to our long-term disadvantage. Respectful of this possibility, early in World War II the British developed chaff (or "window") but were at first afraid to use it, despite the additional penetrativity it would have conferred upon RAF bombers, because they were afraid the Germans would copy the trick and be able to attack England with impunity.

In an analogous way, revealing the existence of a certain capability *might* influence the future shape of war in an undesirable way. In the late 1930s, the Germans synthesized the first effective nerve gas agents. But these discoveries were then concealed, *not* so that these chemicals might serve as a withheld capacity for use at a key juncture later, but rather to insure that other powers did not view a German "revelation" of these toxins as a *threat* to use them later (thereby raising the risks that Germany's enemies might themselves preemptively use chemical weapons).

Fourth, suddenly unveiling a hidden capability *seems* to be most appropriate and useful in a highly limited case—when decisive action is not necessarily essential to national interests, when face-saving withdrawal options exist, when agreed upon bounds on action are in force, and when people have the time and presence of mind to study the implications of new developments with some objectivity. But in limited conflict scenarios, the deterrent or combat gains may not be sufficient to overcome the long term consequences of unveiling a very significant technology.[6]

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[6]Suppose that the British had some "stealthy" Harriers: Would the military payoffs of air strikes on Port Stanley airfield in the Falkland Islands war compensate for the exposure to a world audience of the possible nature of the stealth trick (e.g., were a plane to be lost or key data on it collected)? Similarly, would we betray a very capable ASW

Fifth, short of fantastic "Buck Rogers" style inventions, it is hard to keep projects so secret that meaningful force structure increments can be suddenly broken out and effectively used. True, some covert systems could pay important combat dividends when employed in limited numbers. But in most major contingencies, some substantial depth of capability would be required. Moreover, extensive training, integration with other less shadowy capabilities, doctrinal assimilation, etc. must be accomplished in most cases, and concealing these enterprises may be much more difficult.

Sixth, broadly speaking, there are probably few new missions (especially conventional ones). Future unveiled capabilities rather would make it easier to accomplish some existing mission. Generally, *trends* in technologies, not breakthroughs, are important. Before World War I, for instance, there was a considerable arms race among the battleship navies. Incremental developments in armoring, powerplants, fire control, etc. were very important—indeed, entire battle concepts and ship design philosophies were repeatedly made obsolete. But the development of each new instrument of war was rather predictable, and therefore even fairly pivotal combat innovations did not astonish rival onlookers. The same is true in tanks (where one can extrapolate trends in weapons, fire control, armoring, etc.), in air-to-air fighters (speed, range of missilery, etc.), and so on.

Seventh, suddenly unveiled capabilities will probably mainly startle fairly compartmentalized communities in the adversary's military enterprise. A related consideration is whether the appropriate observers recognize the innovation and adequately understand its importance. As noted above, there may be a "signal to noise" problem, or the enemy may be inclined to doubt the utility of some development (as was even the case among many Germans looking on at the Peenemunde rocket missile programs in their early years). And, as noted elsewhere, the enemy may pretend not to be impressed.

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device to help the Swedes chase Soviet spy submarines out of their waters? Deterrence—by virtue of the threat of escalation—is at work in limited situations anyway, so we would have to weigh the extra deterrence added by a new capability in this highly *political* context.

INSTEAD OF DECISIVE DCR OPTIONS?

I believe it fairly unlikely that any covert military capabilities will appear on the horizon that (1) can be suddenly unveiled, (2) will make the desired impression on the enemy, (3) will not be neutralized at excessive cost to the unveiler, and (4) will affect the adversary's overall balance assessments and decision to attack.[7] Nonetheless, other aspects of the enemy assessment process can be influenced by capability revelation. There are alternative means to use important concealed capabilities. These might be based on a program for the peacetime manipulation of enemy assessments with the aim of injecting uncertainty into diverse Soviet calculations. A DCR might be based on the proposition that the course of a long-term politico-military competition determines whether conflict or peace prevails. In this competition, even dramatic technical-military breakthroughs would be but milestones along that path. The next section, accordingly, considers the problem of keeping the Soviets off balance by manipulating their evaluation of long-term military balances.

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[7]Admittedly, in this as in so many other matters, where one stands depends on where one sits. This discussion reflects the perspective of a leadership contemplating peacetime issues where the value of programs, their costs, and the stability of the deterrent balance can be fairly rationally weighed. The foregoing discussion would not describe as well (or at all) the deliberations of a leadership in a more hurried, desperate, and uncertain environment. As the tide turned against the German government in World War II, for instance, the perceived value of secret weapons (among other things) grew way out of proportion to their real military use. Indeed, so great were such misperceptions that the true potential of many technological initiatives was actually misassessed. More than anything else, such perceptions reflected the growing hopelessness of the overall war situation, and not any very sound strategic analysis.

V. AN ALTERNATIVE, INDIRECT DETERRENCE-ENHANCING ROLE FOR DCR

I have just argued that it is probably unwise to expect that we can ever reveal hidden capabilities to stop previously undeterred enemies in their tracks. Rather, we might only betray some secret or other, perhaps to the detriment of the capability in question. And even if we could head off a drift toward war, we quite possibly have just postponed a show-down until an adversary can devise techniques and tools to deal with our DCR.[1]

However, this fact does not rule out the possible indirect utilization of DCR to enhance deterrence. Rather than aiming to shape Soviet decisions when it is probably too late to do so, it may prove advantageous to attempt to influence and, if possible, discredit the Soviets' *day-to-day* intelligence and net assessment processes. Thus, DCR might have intentions similar to the outputs of a deliberate strategic *deception* program, with the obvious difference that the data made available to the USSR would be authentic (if not necessarily complete).

Why would such a course of action be desirable? In theory, the more confidence the USSR's leadership has in its knowledge of U.S. capabilities, the more likely they will be to contemplate overt aggression if other factors make some military option seem the least of the apparent evils before them. Military analysts tend to be pessimistic about various aspects of the military balance because natural conservatism leads them to respect uncertainty. Consequently, the Soviets probably do not often substantially underestimate our strengths (just as we typically do not tend to downplay theirs).

By suddenly revealing something important they hadn't suspected, or by manipulating their perspective on our progress, we could intensify their uncertainty about other U.S. capabilities or the "direction" of our research effort as a whole. They might then lack confidence that attack was the "least awful" of a set of bad options before them. In other words, the DCR might encourage the Soviets to systematically overestimate our

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[1] In other words, abrupt revelations cannot reliably be expected to produce substantial results. This of course does not rule out the possibility that we can effect modest "best-we-can" changes—adjustments in enemy schedules, tactics, etc. that can work in a small way to our advantage should combat begin. But such changes would have no real deterrence-enhancing effect per se.

actual strength. The DCR could be a useful adjunct to other measures normally employed to enhance the appearance of U.S. military power.

SOVIET VULNERABILITIES TO ROUTINE DCR

Among the reasons to believe that DCR might be useful in this way two stand out. First, periodic revelations of our technological virtuosity would exploit deeply rooted Soviet fears of U.S. materiel superiority. One of the biggest problems with the U.S. weapon system acquisition process is the lengthy delay in putting new, good ideas into the field as effective combat hardware. But by DCR, we can reap some of the benefits of our new technologies without requiring full-up combat ready deployment. We can also exploit even those technologies that will never see utilization in any military system (given, for one thing, frequent program terminations).

Second, the prosecution of an *indirect* peacetime DCR strategy would take explicit advantage of the inherent rigidity of Soviet bureaucracy. The USSR is not well-known for its ability to respond promptly and flexibly to unfamiliar developments. The fact that new U.S. capabilities take a long time to field would therefore be somewhat mitigated by the fact that the USSR might require considerable time to mobilize its countermeasures. These DCRs accordingly might be selected on the basis of their probable effect in exploiting known or suspected areas of dissension or confusion within Soviet defense decisionmaking circles.

Not only could we undermine the Soviets' confidence and intensify their uncertainty, but to a limited extent, we could also hope to:

1. *Force them into actions detrimental to their interests.* For instance, a revelation of a potential U.S. technology—which might not later actually be introduced into a weapon system—might lead the Soviets to redirect an ongoing counter-program in such a way that the ultimate U.S. system fielded would face a lesser counterthreat. The B-70 provides a classic example here: The Soviet response to this apparently quite legitimate new capability (although it was not concealed) included two very expensive programs (the SA-5 SAM and MiG-25 fighter), which were by no means optimized for defense against the U.S. bomber concept eventually selected (low altitude penetration by B-52 or eventually B-1).

2. *Manipulate their deliberations.* Planners in specific technical areas are vulnerable to manipulation because they tend to specialize to such a degree that they may effectively assimilate the enemy's approach to a generic planning problem. We might thus encourage adversary planners to anticipate next "logical" steps to our advantage. We could then eventually degrade the credibility of balance estimates in leadership eyes and undercut leadership confidence as they approach expensive decisions.[2]
3. *Cloud their intelligence data.* The Soviets may have less than 100 percent confidence in surreptitiously acquired technological intelligence. A DCR might in some circumstances promote an incorrect consensus among Soviet planners about U.S. capabilities.
4. *Minimize the adverse effects of "real leaks."* Every so often, important covert capabilities are leaked inadvertently or without authority. Given the occasional transparency of U.S. "classified" activities, in other words, the Soviets' problem is not so much one of data acquisition as of discriminating wheat from chaff. A program of judicious DCR might help us to contaminate the Soviets' intelligence acquisition process and manipulate their estimates at the same time.
5. *Intensify the effect of demonstrations of known capabilities.* Because of the scarcity of practical "lessons" that can be derived from the wartime employment of certain technologies or capabilities, *combat demonstrations* carry great political weight. A DCR capaoility could attempt where possible to magnify the effect of demonstrations as they occur. Such episodes as the sinking of the Eilat or the Antelope, or the 1982 MiG air combat debacle over Lebanon, captured a great deal of attention. An ongoing DCR scheme could help us exploit and focus such shocking events, which, although not covert per se, afford an opportunity to intimidate enemy operational types.

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[2]An example (albeit a "backward" one) of this kind of manipulation is that in the 1950s, we attempted to build a nuclear powered bomber (ANP). Because of our own bomber orientation, we tended to assume that the USSR was avidly pursuing similar bomber programs. At one point U.S. intelligence detected the movement of a key scientist from a gulag to a top laboratory. Given this man's technical specialty, we assumed that the USSR was ahead in their ANP development program. In fact, this man had been assigned to the Soviet *ICBM* program. This example suggests the general kind of effect we might achieve in low-key capability revelations. Note that in this case deliberate deception was as far as we know not a Soviet aim.

For instance, following the demonstration of a foreign missile's ability to sink ships, we could reveal the fact that our similar weapon was better still.

6. *Undermine the confidence of the Soviet Union's allies, or of other impressionable third parties.* One might reveal some covert capabilities for the consumption of audiences other than the Soviets. Some local witnesses would probably tend to be more impressed than the Soviets even if the demonstration was not very militarily important. A wavering ally could be directed away from the Soviet camp by a demonstration that his USSR-supplied gear and tactics were inferior. Similarly, U.S. diplomacy (especially arms transfer policy) might also be supported.

DESIGNING A NONCRISIS DCR PROCESS

Given that the use of indirect DCRs would play an important role in shaping routine Soviet evaluations of U.S. capabilities—as well as Soviet assessors' own degree of confidence in their understanding of U.S. military capabilities—what forms might an actual DCR process take? Two DCR *tactics* can be used to develop procedures and requirements for DCR planning.

The first tactic uses what I will call "stark" or "episodic" revelations. In effect, these are "one time" DCRs, to be used if and when appropriate circumstances materialize. These DCRs would reveal in some explicit way a key piece of hardware or some military capability. On some occasions, we might even contrive to have the enemy learn of it by means he believes to be clandestine.

This kind of tactic can support several objectives, many of them relating to specific enemy decisions about the design and procurement of particular weapons. For example, such DCR might be used to influence Soviet programs at key milestones.[3] Suppose the USSR was approaching a final decision on the top speed of a new attack submarine and that the U.S. Navy judges it to be in our advantage for the Soviets to have a fast noisy sub rather than a slower but quieter one. We might reveal some system suggesting a U.S. ability to detect very quiet submarines much greater than previously assumed or the possession of a highly sophisticated, very high speed torpedo. Such a revelation could influence the Soviets' SSN design decision to our advantage. Other

[3]These milestones would be equivalent to the Defense Systems Acquisition Review Council (DSARC) milestones used by the United States in procuring weapon systems.

payoffs might include the discrediting of an emerging intelligence assessment, the redirection of adversary R&D priorities, and the like.

The second DCR tactic can be characterized as one of more subtle, on-going "plotted" or "indirect" revelations, which are made on a continuing basis in conjunction with other intelligence activities. They have no immediate specific intention but are intended to contribute to increased uncertainty and confusion in the enemy's assessment process. Compared with the first tactic, it would be much more difficult to lay out costs and benefits of these tactics, and so some overall guidelines would need to be established to permit tradeoff calculations involving the effects of the DCR and the costs of unveiling programs.

MANAGING SUCH A DCR PROGRAM

The design principles of a deliberate revelation program for either of the two peacetime DCR tactics cited above are not clear at first inspection. However, both the risks and the payoffs involved in such a program may be high. On the one hand, if an important military capability's *effectiveness* depends on the protection of its security—on ingenious design features, employment techniques and tactics, etc.—then we risk compromising a special capability. On the other hand, there may be unusual occasions upon which serious breaches of security may be justified. Given these facts, how should we go about designing our plan of action?

REQUIREMENTS OF THIS TYPE OF DCR STRATEGY

From a DCR manager's point of view, there are several requirements to either of the two DCR tactics described here. We must understand both the Soviet bureaucracy targeted by a DCR and the knowledge Soviet design, policy, and other agencies have of covert U.S. programs. We would certainly need to develop channels for revelation that are credible to the enemy. There must be some guidelines and a framework for assessing the costs of disclosure of covert programs and relating subsequent U.S. decisions to Soviet responses to a revelation.[4] Coordination would be necessary among multiple U.S.

[4]In addition, those charged with this function would also be made aware of inadvertent breaches of security on programs, potential future U.S. technological choices, and so on.

government agencies and others,[5] should a DCR planning problem cut across organizational jurisdictions.

The degree of difficulty each of these requirements poses depends on the tactic we employ—in particular, it will be very difficult to produce comprehensive catalogues of Soviet "knowledge" about U.S. programs, and inaccuracies in those data bases could not only confound our DCR but also betray important information about our ability to monitor Soviet goings-on.[6]

In general, our inability to monitor the Soviet bureaucracy on a detailed and continuous basis will frustrate a sustained, *indirect* DCR campaign. However, we may experience fortunate alignments of inadvertent U.S. leaks with areas of good knowledge of Soviet issues, or we may have secret programs that can fit well into contemporary Soviet deliberations on a target of opportunity basis. A *stark* revelation is thus the preferred DCR tactic given this requirement.

The second major prerequisite of a DCR scheme concerns what we have to lose by unveiling a covert program. The costs of any DCR depend on the reasons for the concealment of a program in the first place and the depreciation of a newly revealed capability as a function of time. In both cases, the differences between the stark and indirect DCR tactics are minimal. To balance our need to weight the advantages of projecting an image of superior military power with the need to protect covert capabilities, we must first ask why a capability is covert, and we find that the reasons can vary greatly:

- Its peacetime value depends on its covertness. Intelligence systems fall into this category.
- Its wartime effectiveness would be jeopardized by disclosure. Electronic countermeasure techniques for aircraft are an example.
- It represents a technical breakthrough we do not want the enemy to emulate. Some ASW techniques would fall partly into this category.

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[5]Allies and possibly industry would also be involved from time to time.

[6]We need be mindful of the consequences of any conclusion by Soviet assessors that the United States had become overly fond of DCR manipulation. Deliberate revelations—or U.S. efforts to limit damage when inadvertent revelations occurred—would then cease to enhance deterrence or have any other value; and U.S. revelation may indeed encourage Soviet *underestimation* of suspected but ill-understood U.S. capabilities.

- We are hanging onto it for a time when its use could be decisive in combat. The A-bomb in World War II would be one example of this type of rationale.
- There would be adverse domestic political and diplomatic repercussions if revealed (for instance, biological weapon development), or we wish to avoid undesirable enemy reaction or even preemption.
- For psychological reasons (e.g., bomber crews will be more confident and presumably more effective in their missions if they believe that sophisticated devices enhance their survival prospects).

Once we have determined the reasons for covertness, it is possible to begin to characterize the adverse consequences of revealing a covert capability. But here the relevance of timing considerations should be taken into consideration. The following two points must be factored into DCR planning, whether we are using stark or indirect revelations.

The first relates to the expected remaining shelf life of a capability with or without subsequent modifications. Deciding to betray a new, expensive capability that has just come on line does not raise the same issues as does the betrayal of a system whose twilight of effectiveness may be in sight. However, we might make modest adjustments to aspects of a revealed system that allow us to impress our opponent and possibly offset some of the costs of unveiling a capability. Conceivably such a property (analogous to the "pre-planned product improvement" systems acquisition tactic) could be designed into some systems.[7]

The second factor relates to the *decay* of a capability's effectiveness as a function of time following its disclosure. Capabilities will degenerate at different rates and according to "schedules," the specific characteristics of which may or may not be easily determined in advance. If the Soviets learn the location of a hypothetical covertly deployed sensor array, its effectiveness decay curve may be a step function. If they learn about some new bomber penetration electronics they might be able to retune their radars in short, but not immediate, order. But adding some entirely new wrinkle to, say, bomber

[7]By exploiting this first timing phenomenon, we may enhance our DCR leverage. In some circumstances (depending on the DCR scenario), we might be able to determine that adversary assessment staffs strongly doubt that we will discard the latest capabilities to impress him; thus, if an enemy is impressed with a capability that he suspects is nearly obsolete, he may be very nervous when speculating on what our *state-of-the-art* capabilities must look like.

penetration or ASW, might demand entirely new hardware or basing or training. Here the effectiveness decay curve might not be steep at all.

The third prerequisite of a DCR scheme concerns the special needs raised by the participation of more than one agency. It is indeed hard to think of any DCR scheme that would *not* require close collaboration among the services and, more likely, between civilian and service entities, all of whom will have different views about the value of a capability or the costs paid if it is unveiled. Accordingly, special institutional arrangements would have to be devised either for plotted revelations on a continuing basis or for stark revelations on an *ad hoc* basis.

What sort of institutional framework might be devised to carry out a DCR program? Regrettably, it is probably impossible for the United States to orchestrate a DCR policy on a consistent day-to-day basis. A DCR scheme probably would frequently be foiled by deterioration of the integrity of security surrounding programs; in particular, U.S. capabilities will inevitably leak out, especially as promising weapon systems (and appropriation of substantially larger sums) approach development decision points. Service control over and security compartmentalization of programs would prohibit a centralized "clearing house" approach to routine DCR. Finally, so many agencies might ultimately have to be represented in an ongoing, formal DCR structure that smooth, responsive, and autonomous decisions would be difficult to assure.

Given the probable difficulties with institutionalizing a DCR bureaucracy, we should, in effect, allow nature to take its course: We should probably consider DCR options on a "target of opportunity" basis. If some standing DCR capability is retained, it should be oriented almost uniquely to the consideration of DCR options as a means of damage limitation should leaks and selected other events occur—such as exploitable demonstrations of combat capabilities and third world influence opportunities.

An ongoing "plotted" DCR program would probably be very difficult to arrange from an organizational point of view. As was the case when it came to the "Soviet assessment" requirement for a DCR program, DCR as a deterrence enhancing method would probably be more successful if we attempt to employ only the stark revelation tactic.

PROBLEMS AFFLICTING THE TWO DCR TACTICS AND RECOMMENDATIONS

The following results apply to the stark revelation and plotted, indirect revelation day-to-day DCR tactics. For "stark revelations" the enemy:

- May perceive that we are trying to manipulate him and resist that effect
- Could believe that we were anxious about specific weaknesses of our own and respond in undesirable ways
- Might undertake countermeasure programs that affect our DCR program to an undesirable degree (or still concealed parts of a partially disclosed program)

For the "plotted revelation" tactic, the problems are much more serious and the prospects for a successful DCR initiative correspondingly bleaker:

- Enormous security problems would frustrate our ability to carry on the program in an orderly way
- Requirements for data about various aspects of our adversary's intelligence, technical, and other systems probably are beyond even the most concerted and cooperative efforts we are likely ever to be able to muster
- Running "too active" a manipulation program could lead the Soviets to the conclusion that we are locked into a chronic manipulation campaign. This could undercut the fundamental objectives of a DCR program, would stymie efforts to limit damage by DCR techniques when inadvertent leaks do occur, and could actually encourage the Soviets to *underestimate* suspected but poorly understood U.S. capabilities

All things considered, a discrete, occasional "stark revelation tactic" approach to DCR seems the soundest option. In general, a DCR would thus be worked out as targets of opportunity appeared or when there was a need to manage an inadvertent leak, perhaps with little warning. Organizationally speaking, it is probably in the interests of the individual services and their technical branches and supporting agencies to manage their own DCR initiatives as they see fit on an in-house basis.

SELECTED STARK DCR TACTICS

Because a DCR would be a highly scenario-dependent entity, it is impossible to say in advance exactly what forms they could take. A few hypothetical examples follow here. Perhaps an expanded version of this list could serve as some kind of template for ad hoc short notice DCR design. We might:

- *Reveal redundant/backup capabilities.* Design our DCR so that we can add on anticipatory counter-countermeasures, be confident that we can tolerate the loss of security on some components of a larger system, etc.
- *Display antecedents/precursors.* For some kinds of capability, there are perhaps lower-order technical DCRs that logically point to a feared U.S. capability without answering all the interesting technical and operational questions. For example, suppose that we have devised a parallel processor of such enormous capacity and such small dimensions that it would significantly improve U.S. open ocean acoustic ASW search capabilities. Rather than reveal this blatantly, we might demonstrate the key "raw" technical capability in some suggestive civilian scientific setting.
- *Have parallel disclosure.* This is like the preceding, but more candid. For instance, the Gemini spacecraft rendezvous program suggested a U.S. capability for satellite inspection or destruction.
- *Make unofficial or semiofficial leaks.* A speculative essay ("What if . . . ?") on some pertinent subject by some commentator known to have high-level official contacts might help to get the right message across. (Although it was an example of neither covert nor technical questions, the well-known 1950 *Foreign Affairs* article by "X"/George Kennan is of this type.)

Of course, this list can be extended to include more "blatant" kinds of disclosure—obscure proving grounds displays, "accidents" involving mysterious systems, etc.[8] However, it seems prudent to restrain tendencies to reveal important covert capabilities in highly conspicuous ways. As suggested above, it is preferable that the enemy believes he has stumbled across something inadvertently, and not that a disclosure

[8]In the past few years, some shadowy air accidents prompted flurries of speculation that stealth aircraft, secret purloined Soviet aircraft, and even a Soviet aircraft equipped with stealth features have been involved.

has not been served up on a tray for his consumption. The principal reason for discretion in this regard is that the Soviets might perceive heavy-handed revelations as deliberate bluffs or red herrings.

An overly conspicuous DCR might also be misconstrued as a sign of U.S. anxiety in some area, perhaps contributing to just the sort of Soviet response that we would be seeking to avoid. Above all, it is essential to recall that capabilities often come as surprises, not because they were brilliantly hidden but because observers failed to draw appropriate conclusions from available (and often ample) evidence. Analogously, observers may wrongly postulate the existence of a "capability" on the basis of sketchy evidence and even conjecture. Such considerations will always ensure that the design of deliberate revelation schemes would remain more an art than a science.

Whatever the objectives and emphases of a DCR initiative, *there is no substitute for detailed planning on the use and payoffs of DCRs*. Clearly a DCR may be costly to us. And the processes we are trying to influence are opaque and mysterious at best, DCR or none. We cannot afford to be casual, lest we squander military advantage and risk the discrediting of any subsequent useful DCRs.

One form such a plan might take is a "DCR Annex" to be attached to the overall management portfolio for any candidate covert program.[9] That Annex would specify such information as the audience to be affected, the ways in which lessons might be digested, the timetable of capability decay if compromise of that program leads to enemy counteraction of given types, etc. If a program happened to combine many qualities and express them in the right kind of Annex format, then there would be yet another basis for judging the cost-effective competitiveness of that "black program," a matter of increasing interest now that the Defense budget is likely to continue to head downward and new scrutiny be brought to bear on secret programs.

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[9]Once more, I am indebted to RAND colleague James Winnefeld for this suggestion.

VI. CONCLUSIONS AND IMPLICATIONS

I have suggested that a formal DCR capability is unlikely to be a very valuable crisis management device. For one thing, very few capabilities pack such a sufficient deterrence-enhancing punch that they could materially affect the course of an evolving crisis situation. Even if such capabilities do come along once in a while, the relationships between narrowly defined military competitions and the factors that influence strategic choices at the highest level are, at best, indirect. And in the hypothetical (and I believe extremely unlikely) case where we *can* head off a crisis by DCR, we must also take into account the costs of having possibly lost a valuable capability together with the ultimate consequences of the enemy's potential acquisition of that capability himself.

It may very well be possible to routinely introduce what might be called "wild-card considerations" into Soviet planners' peacetime balance assessments in such a way that general Soviet confidence in the quality of those assessments is eroded. Over the long haul, a coherent series of carefully planned disclosures could inflame Soviet anxieties that their capabilities are markedly inferior to those of the United States in critical areas. If the goal of inspiring more caution in Soviet defense policy is successful, the results of a long-term U.S. DCR effort could include fortified deterrence.

In principle, then, a DCR campaign could pay some useful, if modest, dividends. We might find that we could get a little bit of extra deterrence out of our covert program investment dollars. However, we must recognize that several features probably will complicate our planning, perhaps so much so that we will be unable to manage a routine "plotted" DCR program. DCRs should, accordingly, probably be reserved for specialized situations.

Among the reasons for the difficulty of plotted DCR use are the facts that DCRs could land us in worse shape overall, provide valuable intelligence calibration data to the Soviets if they happen to know about the candidate capability in the first place, and work at cross purposes to other possible intelligence community schemes, notably deception programs. Moreover, the bureaucratic problems intrinsic to any such DCR activity are liable to be formidable.

Nonetheless, in certain specialized cases, a ready and exercised DCR capability could prove valuable. As noted, revealed on a one-shot basis, DCR options could fuel

already formidable Soviet anxieties about U.S. technological prowess. In particular, a DCR regime, once conceptually evaluated in advance (probably by evaluation of case studies) and tested, might come in handy were we to be faced with neutralizing the effects of an *inadvertent* revelation or detected Soviet penetration of a key covert program. Evaluation of Soviet activities in the aftermath of a DCR might provide some insight into their intelligence and technical decisionmaking processes. Clear understanding of the specifics of the DCR concept may also help us contend with deliberate *Soviet* revelations and grandstanding. And other nations than the USSR might be powerfully influenced by U.S. DCRs in certain circumstances.

Potentially the highest payoff use of a stark DCR would involve the unveiling of a new and powerful U.S. technological capability to shape a specific Soviet hardware decision. I indicated earlier that consideration of DCRs would ordinarily be concentrated more or less completely on *gadgets* and *specifications of gadgets*. We know only too well that technological threats, especially discontinuous and "striking" ones, can shape the force structure design decisions of both sides.

Thus, the Soviet demonstration in 1957 of an ICBM "concept"—which in fact did not begin to put on line any substantially new and different intercontinental capability until roughly 1964—helped stimulate an abrupt redesign of the U.S. nuclear posture. Arguably, such a posture reconfiguration was in the works anyway, but the fact remains that the Soviets' technical display did have a concrete effect on the scale and schedule of many U.S. strategic programs.

We also know that technological aspects of a force structure can influence operational planning, and even strategy.[1] Because many security problems feature highly asymmetrical planning contexts for the United States and our Soviet rivals, the simple existence of some new capability can shape adversary security planning without undermining the revealer's position. For example, the Southwest Asian scenario finds very different U.S. and Soviet strategies as a consequence of the highly dissimilar strategic deployability problem. Any technical change that undercuts enemy or enhances friendly force deployment in the region could influence higher level deliberations. Yet, given basic asymmetries, the enemy may not be able to use his own version of the DCR to turn the tables on us to even the score. In this way, technical revelations might over

[1]For an expansion on this point, see Kevin Lewis, "The Defense Planning Process: The Significance of the Strategic Nuclear Disconnect," The RAND Corporation, P-7165, October 1985.

the long run shape enemy policy to our advantage, and do so in such a way as to justify the revelation of sometimes very sensitive technologies.

An example from the period before World War II illustrates both of these points and provides evidence to planners contemplating the stark DCR option (in the case to be described, we were the "victims" of an enemy DCR). U.S. attack submarine doctrine in the 1930s was based on what turned out to be an exaggerated fear of new antisubmarine technologies (surveillance aircraft and to a lesser extent such new sensors as radar and the acoustic ASDIC). Our submariners' Anti-Surface Warfare (ASuW) operational concepts and force structure took this fear to heart: Tactical doctrine emphasized attacks from the greatest possible range; and a magnetic influence torpedo trigger was developed in part because of difficulties with contact fused torpedoes experienced at standoff ranges.

But both our tactical and technical overreaction to the apparent ASW threat caused us early wartime problems—the long-range standoff doctrine produced few kills and squandered numerous attack opportunities chiefly because of the tactical complexities of attack at maximum ranges and the serious shortcomings of the magnetic fuse. When it was learned that the ASW threat was not so great as had been thought, U.S. submarines resorted to close-in attacks with straight running, direct hit torpedoes, producing very impressive results. In this case, a desirable U.S. reaction from a Japanese perspective was produced by our fear of advanced enemy capabilities. True, the capabilities of note were not explicitly demonstrated and did not originate with solely Japanese capabilities, but they were "leaked" to the extent that American planners were impressed by and responded to them (to the Japanese Navy's benefit). Here, then, is a case where a partial, nondeceptive "revelation" of information about advanced military technologies—judged by conservative U.S. military planners to pose a very grave threat to the ability of our forces to operate and survive—influenced not only certain U.S. force programs, but also an entire service branch's concept of operations to the surrogate revealer's temporary advantage.

I believe that there is a modest need for some body of DCR theory to inform our decisions in special technical cases. There is a need for DCR doctrine and rules even if we adopt the most minimal DCR objectives, namely the use of DCR potentially to hedge against inadvertent disclosures and Soviet use of DCR, and to provide a planning base should a DCR target of opportunity suddenly appear. At a minimum, such rules should:

- Identify Soviet doctrinal and operational anxieties
- Be one basis for systematic, on-going efforts to catalogue Soviet knowledge about U.S. covert programs
- Characterize in detail the factors used in tasking intelligence gathering aims
- Determine Soviet sensitivities to deviations from an apparent state-of-balance that DCRs might herald.

Above all, some evaluation methodology for DCRs should be designed to answer these two questions: What penalties are we imposing on our adversaries, and what injury are we inflicting on ourselves by DCR? In this regard, my suspicion is that, without plans and analysis of DCR options, we could risk overplaying our hand with *ad hoc* DCRs, whether this reveals too much or causes us to expect too much, or both. Plans and thoughtful preparation may yield tangible results. Given the long lead times of many modern weapons, the tradeoffs in a design concept that must be frozen before advanced development can begin, and the tendency not to give up some initial design concepts even in the face of compelling evidence of required changes, even very modest DCRs can, if administered in a timely way, produce results that are "worth the costs." That is, they may produce a desirable effect in adversary assessment and, perhaps, decisionmaking circles without giving away too much in terms of operational effectiveness.